IN THE CLAIMS

Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please cancel claims 3, 5-12, 15-25, 31-57, 62-63, 65-94, 103-104, 111, and 122-123 without prejucide or disclaimer.

Please amend pending claims 26, 95, 97, 100-102, 105, and 107-110 as noted below.

1. (original) A device for treatment of urinary stress incontinence, comprising:

at least one electrode, which is implanted in a pelvic muscle of a patient; and

a control unit, which receives signals indicative of abdominal stress in the patient and responsive thereto applies an electrical waveform to the electrode which stimulates the muscle to contract, so as to inhibit involuntary urine flow through the patient's urethra due to the stress.

2. (original) A device according to claim 1, wherein the signals comprise electromyographic signals received from the at least one electrode.

3. (canceled)

4. (original) A device according to claim 1, wherein the control unit comprises a processor, which analyzes the signals so as to determine when an involuntary urine flow is likely, whereupon the waveform is applied.

5-12. (canceled)

13. (original) A device according to claim 4, wherein the processor is programmable to vary one or more parameters associated with the application of the waveform.

14. (original) A device according to claim 13, and comprising a wireless receiver, which receives data for programming the processor from a programming unit outside the patient's body.

15-25. (canceled)

26. (currently amended) A device according to ~~claim 25,~~ claim 1, wherein the at least one electrode and the control unit are implanted in the body of the patient, and wherein the control unit comprises a rechargeable power source.

27. (original) A device according to claim 26, wherein the power source is recharged by inductive energy transfer, substantially without electrical contact between the control unit and any object outside the patient's body.

28. (original) A device according to claim 1, wherein the pelvic muscle comprises the levator ani muscle.

29. (original) A device according to claim 1, wherein the pelvic muscle comprises the urethral sphincter muscle.

30. (original) A device according to claim 1, wherein the pelvic muscle is adjacent to the urethral sphincter muscle.

31-57. (canceled)

58. (original) A method for treatment of urinary stress incontinence of a patient, comprising:

implanting an electrode in a pelvic muscle of the patient;

receiving a signal from the patient's body indicative of abdominal stress; and

responsive to the signal, applying an electrical waveform to the electrode, which stimulates the muscle to contract so as to inhibit involuntary urine flow.

59. (original) A method according to 58, wherein the pelvic muscle comprises the levator ani muscle.

60. (original) A method according to claim 58, wherein the pelvic muscle comprises the urethral sphincter muscle.

61. (original) A method according to claim 58, wherein implanting the electrode comprises implanting an electrode in proximity to the urethral sphincter muscle.

62-63. (canceled)

64. (original) A method according to claim 58, wherein receiving the signal comprises receiving an electromyographic signal.

65-94. (canceled)

95. (currently amended) ~~A device according to claim 94,~~ A device for inhibiting involuntary urine flow, comprising:

at least one electrode, which is adapted to be implanted in a pelvic muscle of a patient;

a sensor, which is adapted to sense a change in pressure of an abdomen or a urinary bladder of the patient and to generate a signal responsive thereto; and

a control unit, which is adapted to receive the signal, analyze the signal to determine a level of abdominal stress of the patient, and, responsive thereto, apply an electrical waveform to the electrode which stimulates the muscle to contract so as to inhibit involuntary urine flow through the patient's urethra due to the stress,

wherein the control unit comprises a processor, which is adapted to analyze the signals so as to determine when an involuntary urine flow is likely, whereupon the waveform is applied, and

wherein the processor is programmable to vary one or more parameters associated with the application of the waveform.

96. (previously presented) A device according to claim 95, and comprising a wireless receiver, which is adapted to receive data for programming the processor from a programming unit outside the patient's body.

97. (currently amended) ~~A device according to claim 92,~~ A device for inhibiting involuntary urine flow, comprising:

at least one electrode, which is adapted to be implanted in a pelvic muscle of a patient;

a sensor, which is adapted to sense a change in pressure of an abdomen or a urinary bladder of the patient and to generate a signal responsive thereto; and

a control unit, which is adapted to receive the signal, analyze the signal to determine a level of abdominal stress of the patient, and, responsive thereto, apply an electrical waveform to the electrode which stimulates the muscle to contract so as to inhibit involuntary urine flow through the patient's urethra due to the stress,

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wherein the control unit is adapted to be implanted in the body of the patient.

98. (previously presented) A device according to claim 97, wherein the control unit comprises a rechargeable power source.

99. (previously presented) A device according to claim 98, wherein the power source is recharged by inductive energy transfer, substantially without electrical contact between the control unit and any object outside the patient's body.

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100. (currently amended) ~~A device according to claim 92,~~ A device for inhibiting involuntary urine flow, comprising:

at least one electrode, which is ~~adapted to be~~ implanted in a pelvic muscle of a patient;

a sensor, which is adapted to sense a change in pressure of an abdomen or a urinary bladder of the patient and to generate a signal responsive thereto; and

a control unit, which is adapted to receive the signal, analyze the signal to determine a level of abdominal stress of the patient, and, responsive thereto, apply an electrical waveform to the electrode which stimulates the muscle to contract so as to inhibit involuntary urine flow through the patient's urethra due to the stress,

wherein the at least one electrode is ~~adapted to be~~ implanted in the levator ani muscle.

101. (currently amended) ~~A device according to claim 92,~~ A device for inhibiting involuntary urine flow, comprising:

at least one electrode, which is adapted to be implanted in a pelvic muscle of a patient;

a sensor, which is adapted to sense a change in pressure of an abdomen or a urinary bladder of the patient and to generate a signal responsive thereto; and

a control unit, which is adapted to receive the signal, analyze the signal to determine a level of abdominal stress of the patient, and, responsive thereto, apply an electrical waveform to

the electrode which stimulates the muscle to contract so as to inhibit involuntary urine flow through the patient's urethra due to the stress,

wherein the at least one electrode is adapted to be implanted in the urethral sphincter muscle.

102. (currently amended) ~~A device according to claim 92,~~ A device for inhibiting involuntary urine flow, comprising:

at least one electrode, which is adapted to be implanted in a pelvic muscle of a patient;

a sensor, which is adapted to sense a change in pressure of an abdomen or a urinary bladder of the patient and to generate a signal responsive thereto; and

a control unit, which is adapted to receive the signal, analyze the signal to determine a level of abdominal stress of the patient, and, responsive thereto, apply an electrical waveform to the electrode which stimulates the muscle to contract so as to inhibit involuntary urine flow through the patient's urethra due to the stress,

wherein the at least one electrode is adapted to be implanted in the pelvic muscle, the pelvic muscle being adjacent to the urethral sphincter muscle.

103-104. (canceled)

105. (currently amended) ~~A device according to claim 103,~~ A device for inhibiting involuntary urine flow, comprising:

at least one electrode, which is adapted to be implanted in a pelvic muscle of a patient;

a sensor, which is adapted to perform a strain measurement of an abdomen or a urinary bladder of the patient, and to generate a signal responsive thereto; and

a control unit, which is adapted to receive the signal, analyze the signal to determine a level of abdominal stress of the patient, and, responsive thereto, apply an electrical waveform to the electrode which stimulates the muscle to contract so as to inhibit involuntary urine flow through the patient's urethra due to the stress,

wherein the control unit comprises a processor, which is adapted to analyze the signals so as to determine when an involuntary urine flow is likely, whereupon the waveform is applied.

106. (previously presented): A device according to claim 105, wherein the processor is programmable to vary one or more parameters associated with the application of the waveform.

107. (currently amended) ~~A device according to claim 103,~~ A device for inhibiting involuntary urine flow, comprising:

at least one electrode, which is adapted to be implanted in a pelvic muscle of a patient;

a sensor, which is adapted to perform a strain measurement of an abdomen or a urinary bladder of the patient, and to generate a signal responsive thereto; and

a control unit, which is adapted to receive the signal, analyze the signal to determine a level of abdominal stress of the patient, and, responsive thereto, apply an electrical waveform to the electrode which stimulates the muscle to contract so as to inhibit involuntary urine flow through the patient's urethra due to the stress,

wherein the control unit is adapted to be implanted in the body of the patient.

108. (currently amended) ~~A device according to claim 103,~~ A device for inhibiting involuntary urine flow, comprising:

at least one electrode, which is adapted to be implanted in a pelvic muscle of a patient;

a sensor, which is adapted to perform a strain measurement of an abdomen or a urinary bladder of the patient, and to generate a signal responsive thereto; and

a control unit, which is adapted to receive the signal, analyze the signal to determine a level of abdominal stress of the patient, and, responsive thereto, apply an electrical waveform to the electrode which stimulates the muscle to contract so as to inhibit involuntary urine flow through the patient's urethra due to the stress,

wherein the at least one electrode is adapted to be implanted in the levator ani muscle.

109. (currently amended) ~~A device according to claim 103,~~ A device for inhibiting involuntary urine flow, comprising:

at least one electrode, which is adapted to be implanted in a pelvic muscle of a patient;

a sensor, which is adapted to perform a strain measurement of an abdomen or a urinary bladder of the patient, and to generate a signal responsive thereto; and

a control unit, which is adapted to receive the signal, analyze the signal to determine a level of abdominal stress of the patient, and, responsive thereto, apply an electrical waveform to the electrode which stimulates the muscle to contract so as to inhibit involuntary urine flow through the patient's urethra due to the stress,

wherein the at least one electrode is adapted to be implanted in the urethral sphincter muscle.

110. (currently amended) ~~A device according to claim 103,~~ A device for inhibiting involuntary urine flow, comprising:

at least one electrode, which is adapted to be implanted in a pelvic muscle of a patient;

a sensor, which is adapted to perform a strain measurement of an abdomen or a urinary bladder of the patient, and to generate a signal responsive thereto; and

a control unit, which is adapted to receive the signal, analyze the signal to determine a level of abdominal stress of the patient, and, responsive thereto, apply an electrical waveform to the electrode which stimulates the muscle to contract so as to inhibit involuntary urine flow through the patient's urethra due to the stress,

wherein the at least one electrode is adapted to be implanted in the pelvic muscle, the pelvic muscle being adjacent to the urethral sphincter muscle.

111. (canceled)

112. (previously presented) A method for inhibiting involuntary urine flow of a patient, comprising:

implanting an electrode in a pelvic muscle of the patient;

receiving a pressure-measurement signal indicative of abdominal stress; and

responsive to the signal, applying an electrical waveform to the electrode, which stimulates the muscle to contract so as to inhibit involuntary urine flow.

113. (previously presented) A method according to 112, wherein implanting the electrode in the pelvic muscle comprises implanting the electrode in the levator ani muscle.

114. (previously presented) A method according to claim 112, wherein implanting the electrode in the pelvic muscle comprises implanting the electrode in the urethral sphincter muscle.

115. (previously presented) A method according to claim 112, wherein implanting the electrode comprises implanting the electrode in proximity to the urethral sphincter muscle.

116. (previously presented) A method according to claim 112, wherein applying the waveform comprises applying the waveform responsive to an electromyographic signal.

117. (previously presented) A method for inhibiting involuntary urine flow of a patient, comprising:

implanting an electrode in a pelvic muscle of the patient;

receiving a strain-measurement signal indicative of abdominal stress; and

responsive to the signal, applying an electrical waveform to the electrode, which stimulates the muscle to contract so as to inhibit involuntary urine flow.

118. (previously presented) A method according to 117, wherein implanting the electrode in the pelvic muscle comprises implanting the electrode in the levator ani muscle.

119. (previously presented) A method according to claim 117, wherein implanting the electrode in the pelvic muscle comprises implanting the electrode in the urethral sphincter muscle.

120. (previously presented) A method according to claim 117, wherein implanting the electrode comprises implanting the electrode in proximity to the urethral sphincter muscle.

121. (previously presented) A method according to claim 117, wherein applying the waveform comprises applying the waveform responsive to an electromyographic signal.

122-123. (canceled)